

- f.) The Rock-Away does not become soiled with feces or urine because it is located above and at a sufficient distance from the anus and the uretha.
- g.) Both backward forward and sideward angular motion of the Rock-Away may be used alone or with assistance.
- h.) For new water closet installations, wherein there is no existing toilet seat already in place, the Rock-Away's bottom seat will be extended 2 inches with bolts supplied, for a normal toilet seat connection.

Brief Description of the Drawings

Fig 1: Cross-section thru the Rock-Away, with closure lid removed.

Fig. 2: Plan view of the Rock-Away, with closure lid removed.

Fig 3: Cross-section of support spring (squared and ground).

Detailed Description of the Preferred Embodiment

Fig. 1: This is a cross section view of the Rock-Away showing the outer abrasive resistant nylon cover, the top and bottom seats. The portable base (1) of the Rock-Away, will be clipped onto the existing toilet seat (3). The person will then be seated on the Rock-Away (2) and commence, rocking back and forth, and side to side (4), compressing the rear springs (5) and depressing the front springs (5), thereby easing an exaction of the bowels.

Fig 2: Plan view of the Rock-Away. Note the (4) spring locations, and the positions of the (3) clips that hold the Rock-Away in place, allowing it to move up and down and from side to side to facilitate the bowel movement.

Fig. 3: This is a cross section view through the Rock-Away, showing the base seat (1) clipped (6) to the existing seat (3), with the vertical coil spring (5) supporting and attached to the top seat (2), which is enclosed in the abrasive resistant nylon cover.

Claim

1. The Rock-Away will ease bowel movements through the rocking activity as controlled by the user, or by an assistant.
2. On those installations where new water closets are being installed, the bottom seat of the Rock-Away will be extended 2 inches and bolted directly to the water closet installations, as are toilet seats presently attached.
3. An additional water closet lid will be provided to close-off the water closet when not in use, on new installations, by lengthening the hinges two inches, in order to fold over and close off the Rock-Away opening.

4. For children and handicapped adults, a moveable Rock-Away chair, with casters, will facilitate the activity described in Claim 1, and at the same time provide for mobility of the chair, plus removal of wastes.
5. Long periods of time can be spent in the Rock-Away Chair getting plenty of exercise, due to horizontal movement, particularly for the lower leg muscles, where clots-causing strokes due to inactivity originate, and partially eliminate the need for diaper changes.

Having described the invention, what is claimed as new to be secured by Letters of Patent follows:

Claims

1. Main Independent Claim: The invention is a toilet seat for encouraging human bowel movements comprising vertically spaced base and seat members which bound a thorough evacuation passage; and means supporting the seat member on the base member which allows the seat member to rock relatively to the base member as the weight of human occupant is shifted back and forth.
- 2.. The seat of claim (1) wherein the supporting means is defined by a set of coil, compression springs, whereby the seat member may shift laterally as well as rock relatively to the base member.
3. The seat of either claim (1) or claim (2) wherein the base member is adapted to rest upon the existing seat of a toilet; and which includes shiftable attaching means for removably securing the base member to said existing seat.
4. The seat of any one of claims 1-3, including a protective cover of elastic material enclosing the base and seat member, and the supporting means.
5. Long periods of time can be spent on the Rock-Away, getting plenty of exercise, due to front to back as well as side to side movement, particularly for the lower leg muscles where clot-causing strokes due to inactivity originate.
6. This Rock Away should lead to a rapid decline in testing for and performing Colostomys prescribed by doctors.
7. Very little toilet tissue would be utilized because the bowel movement would ordinarily not stain the anus.

COIL SPRING DESIGN

Load=80lb., Mean Diameter=1.5", G=11,500,000

Assume allowable working stress=60,000

$$d = \frac{3 PD}{0.3S} \quad d = \frac{3 \frac{80\# \times 1.5''}{.3 \times 60,000}}{.3 \times 60,000} = .188'' \text{ try No.6 wire } = .192$$

$$\text{Find Wahl Factor } K = \frac{4C - 1}{4C - 4} + \frac{0.615}{C} \quad \text{try } C = \frac{D}{d} = \frac{1.5}{.192} = 7.8$$

$$S = \frac{8PDK}{3d} = \frac{8 \times 80 \times 1.5 \times 1.19}{3 \times 3.1416 \times .192} = 51,500 \text{ stress less than } 60,000$$

Use # 7 wire

$$f = \frac{8PD^3}{4Gd} = \frac{8 \times 80 \times 1.5^3}{11,500,000 \times 0.177} = 0.191''$$

Assume clearance between loaded coils = 1/16"

$$\text{Then Pitch} = L = B + f + d = 1/16'' + .0191'' + .192'' = 0.444''$$

$$\text{Clearance} = B = L - f - d = 0.444'' - 0.191'' - 0.177'' = .076''$$

Assume Solid Length is less than 1/7/16"

$$\text{Number of coils} = N = \frac{h}{d} = \frac{1.43}{0.177} = 8 \text{ active coils}$$

$$\text{Therefore Solid Length} = h = 8 \times 0.177 = 1.4''$$

$$\text{Free Length} = H = 8 \times 0.444'' = 3.5''$$

$$\text{Pitch 1 per coil} = L - f = 0.444 - 0.191 = 0.253''/\text{coil}$$

Assume Hw= 2.5" and end coils are squared.

$$N = \text{number of active coils} = \frac{Hw - 3d}{1} = \frac{2.5'' - 3 \times .177}{.253} = 8 \text{ coils}$$

When N= 8

$$H = 8 \times .444'' + 3 \times 0.177 = 4.1''$$

COIL SPRING DESIGN, P.2

$$\text{Total Deflection} = N = (L-d) = 8 \times (.444 - .177) = 2.136''$$

Working load : Working deflection :: Maxium load : Maxium deflection

$$\text{Maxium Working load} = 2.136 \times 80 / 1.53 = 112 \text{ pounds}$$

$$\text{Solid height load } P = \frac{11,500,000 \times 0.177^4 \times 2.136}{8 \times 8 \times 1.5^3} = 112 \text{ pounds}$$

Working stress:Maxium stress::Working deflection:Maxium deflection

$$\text{Maxium stress } S = \frac{64,500 \times 112}{80} = 90,000$$